Raw Sequence Listing Error Summary

ERROR DETECTED **SUGGESTED CORRECTION** SERIAL NUMBER: 09/721,414

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics — The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3, as this will prevent "wrapping".

2 ____ Wrapped Aminos — The amino acid-number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3, as this will prevent "wrapping".

3 ____ Incorrect Line Length — The rules require that a line not exceed 72 characters in length. This includes spaces.

4 ____ Misaligned Amino Acid Numbering — The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.

5 ____ Non-ASCII — This file was not saved in ASCII (DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text so that it can be processed.

6 ____ Variable Length — Sequence(s) ____ contain n's or Xaa's which represented more than one residue. As per the rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.

7 ____ PatentIn ver. 2.0 "bug" — A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

8 ____ Skipped Sequences (OLD RULES) — Sequence(s) ____ missing. If intentional, please use the following format for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X:
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:
This sequence is intentionally skipped

Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).

9 ____ Skipped Sequences (NEW RULES) — Sequence(s) ____ missing. If intentional, please use the following format for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

10 ____ Use of n's or Xaa's (NEW RULES) — Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

11 ____ Use of <213>Organism (NEW RULES) — Sequence(s) _____ are missing this mandatory field or its resporise.

J 6/12

12 ____ Use of <220>Feature (NEW RULES) — Sequence(s) ____ are missing the <220>Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"
Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)

13 ____ PatentIn ver. 2.0 "bug" — Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk.

RAW SEQUENCE LISTING DATE: 12/07/2000
PATENT APPLICATION: US/09/721,414 TIME: 11:53:43

Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

Does Not Comply
Corrected Diskette Needed

see pp 2-3, 7 and

3 <110> APPLICANT: Suga, Hiroaki
W--> 4 <120> TITLE OF INVENTION: Catalytic RNAs with Aminoacylation Activity
W--> 5 <130> FILE REFERENCE: 11520.0222
C--> 6 <140> CURRENT APPLICATION NUMBER: US/09/721,414
W--> 6 <141> CURRENT FILING DATE: 2000-11-22
W--> 6 <160> NUMBER OF SEQ ID: 22
W--> 7 <210> SEQ ID NO: 1
8 <211> LENGTH: 110
9 <212> TYPE: DNA
10 <213> ORGANISM: artificial sequence
W--> 11 <220> FEATURE:
12 <222> LOCATION: 21-(99)89-90
13 <223> OTHER INFORMATION: synthetic oligonucleotide containing random pool of 70
14 nucleotides
W--> 15 <400> SEQUENCE: 1
W--> 17 ggatcgtcag tgcattgaga nnnnnnnnnn nnnnnnnnnn 40
W--> 18 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 80
W--> 19 nnnnnnnnnn ggtggtatcc ccaaggggta 110
21 <210> SEQ ID NO: 2
22 <211> LENGTH: 76
23 <212> TYPE: DNA
24 <213> ORGANISM: artificial sequence
W--> 25 <220> FEATURE:
26 <223> OTHER INFORMATION: completely synthesized primer complementary to the otRNAGln
W--> 27 <400> SEQUENCE: 2
29 tggctgcggt acgaggattc gaacctcgga atgccggatt 40
30 tagaaatccg gtcccttacc ccttggggat accacc 76
33 <210> SEQ ID NO: 3
34 <211> LENGTH: 52
35 <212> TYPE: DNA
36 <213> ORGANISM: artificial sequence
W--> 37 <220> FEATURE:
38 <223> OTHER INFORMATION: 5' primer containing T7 promoter sequence
W--> 39 <400> SEQUENCE: 3
41 ggtaacacgc atatgtaata cgactcacta taggatcgtc 40
42 agtgcattga ga 52
44 <210> SEQ ID NO: 4
45 <211> LENGTH: 20
46 <212> TYPE: DNA
47 <213> ORGANISM: artificial sequence
W--> 48 <220> FEATURE:
49 <223> OTHER INFORMATION: 3'completely synthesized primer
W--> 50 <400> SEQUENCE: 4
52 tggctgcggt acgaggattc 20
55 <210> SEQ ID NO: 5
56 <211> LENGTH: 146
57 <212> TYPE: RNA

FYI: per 1.823 of new sequence Rules, use <221> when describing n or Xaa in the sequence.

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Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

```
    58 <213> ORGANISM: artificial sequence
OK> 59 <220> FEATURE:
    60 <223> OTHER INFORMATION: pre-12 catalytic RNA
W--> 61 <400> SEQUENCE: 5
    63 ggaucgucag uqcauugaga uuuccgcagc ccuucucacu        40
    64 aacggugggu cauggguauu ggcguuaggu gcgggaugcu        80
    65 acgcuggugg uaucccccaaq qquacgggac cggacauucg       120
    66 agauucgaau ccucguaccg cagcca                      146
    69 <210> SEQ ID NO: 6
    70 <211> LENGTH: 151
    71 <212> TYPE: RNA
    72 <213> ORGANISM: artificial sequence
W--> 73 <220> FEATURE:
    74 <222> LOCATION: 12
    75 <223> OTHER INFORMATION: pre-38 catalytic RNA
W--> 76 <400> SEQUENCE: 6
OK> 78 ggaucgucag uncauugaga uuuccgcagc ccuucucacu        40
    79 aacggugggu ucauggguau uggcguuagg ugcgggaugc       80
    80 uacuacgcug gugguauccc caaggguacg ggaccggauc       120
    81 auucgagauu cqaauccucq uaccgcagcc a                151
    84 <210> SEQ ID NO: 7
    85 <211> LENGTH: 150
    86 <212> TYPE: RNA
    87 <213> ORGANISM: artificial sequence
W--> 88 <220> FEATURE:
    89 <223> OTHER INFORMATION: pre-29 catalytic RNA
OK> 90 <400> SEQUENCE: 7
    92 ggaucgucag ugcauugaga uuuccgcagg cccuucucac        40
    93 uaacgguggg ucauggguau uggcguuagg ugcgggaugc       80
    94 uacuacgcug guqguauccc caaygguacg ggaccggaca       120
    95 uucgagauuc gaauccucgu accgcagcca                  150
    97 <210> SEQ ID NO: 8
    98 <211> LENGTH: 150
    99 <212> TYPE: RNA
   100 <213> ORGANISM: artificial sequence
OK> 101 <220> FEATURE:
   102 <223> OTHER INFORMATION: pre-36 catalytic RNA
W--> 103 <400> SEQUENCE: 8
   105 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu        40
   106 aacggugggu cauggguauu ggcguuaggu gcgggaugcu       80
   107 acuacgcugg uqquaucccc aagqguacgg gaccggauca       120
   108 uucgagauuc gaauccucgu accgcagcca                  150
   110 <210> SEQ ID NO: 9
   111 <211> LENGTH: 150
   112 <212> TYPE: RNA
   113 <213> ORGANISM: artificial sequence
OK> 114 <220> FEATURE:
   115 <223> OTHER INFORMATION: pre-24 catalytic RNA
W--> 116 <400> SEQUENCE: 9
```

what does "n" represent, since <2237 response describes "artificial sequence" response in <2137?

see item 10 on Error Summary Sheet

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Input Set : A:\PTO.txt
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```
117 ggaucgucag ugcauugaga uuuccgcagg cccuucucac       40
118 uaacgguggg ucauggguau uggcguuagg ugcgggaugc       80
119 uacuacgcug gugguauccc caaggguacg ggaccggaca      120
120 uucgagauuc gaauccucgu accgcagcca                 150
122 <210> SEQ ID NO: 10
123 <211> LENGTH: 149
124 <212> TYPE: RNA
125 <213> ORGANISM: artificial Sequence
W--> 126 <220> FEATURE:
127 <223> OTHER INFORMATION: pre-25 catalytic RNA
W--> 128 <400> SEQUENCE: 10
130 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu       40
131 aacggugggu cauggguauu ggcguuaggu gcgggauacu      80
132 acuacgcugg ugguauuccc aaggguacgg gaccggacau     120
133 ucgagauucg aauccucgua ccgcagcca                 149
136 <210> SEQ ID NO: 11
137 <211> LENGTH: 149
138 <212> TYPE: RNA
139 <213> ORGANISM: artificial Sequence
W--> 140 <220> FEATURE:
141 <223> OTHER INFORMATION: pre-22 catalytic RNA
W--> 142 <400> SEQUENCE: 11
144 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu       40
145 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
146 acuacgcugg ugguauuccc aaggguacgg gaucggacau     120
147 ucgagauucg aauccucgua ccgcagcca                 149
150 <210> SEQ ID NO: 12
151 <211> LENGTH: 149
152 <212> TYPE: RNA
153 <213> ORGANISM: artificial Sequence
W--> 154 <220> FEATURE:
155 <222> LOCATION: 112
156 <223> OTHER INFORMATION: pre-5 catalytic RNA
W--> 157 <400> SEQUENCE: 12
159 ggaucgucag ugcauugaga uuuccgcagc cccucucacu       40
160 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
W--> 161 acuacgcugg ugguauuccc aaggguacgg gaccggacau  120
162 ucgagauucg aauccucgua ccgcagcca                  149
165 <210> SEQ ID NO: 13
166 <211> LENGTH: 149
167 <212> TYPE: RNA
168 <213> ORGANISM: artificial Sequence
W--> 169 <220> FEATURE:
170 <223> OTHER INFORMATION: pre-19 catalytic RNA
W--> 171 <400> SEQUENCE: 13
173 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu       40
174 aacgguaggu cauggguauu ggcguuaggu gcgggaugcu      80
175 acuacgcugg ugguauuccc aaggguacgg gaccggacau     120
176 ucgagauucg aauccucgua ccgcagcca                 149
```

OK

OK

OK

what does "N" represent?

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PATENT APPLICATION: US/09/721,414 TIME: 11:53:43

Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

179 <210> SEQ ID NO: 14
180 <211> LENGTH: 150
181 <212> TYPE: RNA
182 <213> ORGANISM: artificial Sequence
W--> 183 <220> FEATURE:
OK
W--> 184 <223> OTHER INFORMATION: pre-8 catalytic RNA
W--> 185 <400> SEQUENCE: 14
187 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40
188 aacgggggu ucauggguau ugccguuagg ugcgggaugc 80
189 uacuacgcug gugguauccu caaggguacg ggaccggaca 120
190 uucuagauuc gaauccucgu accgcagcca 150
193 <210> SEQ ID NO: 15
194 <211> LENGTH: 148
195 <212> TYPE: RNA
196 <213> ORGANISM: artificial Sequence
W--> 197 <220> FEATURE:
OK
198 <223> OTHER INFORMATION: pre-23 catalytic RNA
W--> 199 <400> SEQUENCE: 15
201 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu 40
202 aacgggggu cauggguauu ggcguuaggu gcgggaugcu 80
203 acuacgcugg ugguauccca agguacggg accggacauu 120
204 cgagauucga auccucguac cgcagcca 148
207 <210> SEQ ID NO: 16
208 <211> LENGTH: 75
209 <212> TYPE: RNA
210 <213> ORGANISM: Escherichia coli
W--> 211 <220> FEATURE:
OK
212 <223> OTHER INFORMATION: otRNA
W--> 213 <400> SEQUENCE: 16
215 ggugguaucc ccaaggggua agggaccgga uucuaaaucc 40
216 ggcauuccga gguucgaauc cucguaccgc agcca 75
218 <210> SEQ ID NO: 17
219 <211> LENGTH: 160
220 <212> TYPE: RNA
221 <213> ORGANISM: artificial sequence
W--> 222 <220> FEATURE:
OK
223 <223> OTHER INFORMATION: H2 Leu catalytic RNA
W--> 224 <400> SEQUENCE: 17
226 ggaucgucag ugcauugaga ugcccaaagc ccuucucacu 40
227 uccgggggu cauqcguuau ugcguuaggu gaggaaugcu 80
228 aguaugcggg ugguauccaa gggguaaggg accggauucu 120
229 aaaucggcau uccgaggguc gaauccucgu accgcagcca 160
231 <210> SEQ ID NO: 18
232 <211> LENGTH: 156
233 <212> TYPE: RNA
234 <213> ORGANISM: artificial sequence
W--> 235 <220> FEATURE:
OK
236 <223> OTHER INFORMATION: D1-Leu catalytic RNA
W--> 237 <400> SEQUENCE: 18

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Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

239 ggaucgucag uqcauugaga uagugucacu aggcgggggg 40
240 ugauagcgca uuuugagguu ugguuugggg gguuaugcgu 80
241 qaguucuugg qugguaucca agggquaagg qaucuaaauc 120
242 cgacauuccg agguucgaau ccucguaccg cagcca 156
245 <210> SEQ ID NO: 19
246 <211> LENGTH: 35
247 <212> TYPE: RNA
248 <213> ORGANISM: artificial sequence
249 **<220> FEATURE:**
250 <223> OTHER INFORMATION: RNA forming a minihelix
251 **<400> SEQUENCE: 19**
253 ggugguacga gguucgaauc cucguaccgc agcca 35
255 <210> SEQ ID NO: 20
256 <211> LENGTH: 73
257 <212> TYPE: RNA
258 <213> ORGANISM: artificial sequence
259 **<220> FEATURE:**
260 <223> OTHER INFORMATION: V1 variant of otRNA
261 **<400> SEQUENCE: 20**
263 ggugguaucc ccaaggguac gggaccggau ucuaaauccg 40
264 gcauucgaga uucgaauccu cguaccgcag cca 73
266 <210> SEQ ID NO: 21
267 <211> LENGTH: 75
268 <212> TYPE: RNA
269 <213> ORGANISM: artificial sequence
270 **<220> FEATURE:**
271 <223> OTHER INFORMATION: V2 variant of otRNA
272 **<400> SEQUENCE: 21**
274 ggugguaucc ccaaggggua cgggaccgga uucuaaaucc 40
275 ggcauuccga gauucgaauc cucguaccgc agcca 75
278 <210> SEQ ID NO: 22
279 <211> LENGTH: 73
280 <212> TYPE: RNA
281 <213> ORGANISM: artificial sequence
282 **<220> FEATURE:**
283 <223> OTHER INFORMATION: V3 variant of otRNA
284 **<400> SEQUENCE: 22**
286 ggugguaucc ccaaggguaa gggaccggau ucuaaauccg 40
287 gcauucgagg uucgaauccu cguaccgcag cca 73

VERIFICATION SUMMARY DATE: 12/07/2000
PATENT APPLICATION: US/09/721,414 TIME: 11:53:44

Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

L:4 M:283 W: Missing Blank Line separator, <120> field identifier
L:5 M:283 W: Missing Blank Line separator, <130> field identifier
L:6 M:270 C: Current Application Number differs, Replaced Current Application No
L:6 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:6 M:283 W: Missing Blank Line separator, <160> field identifier
L:7 M:283 W: Missing Blank Line separator, <210> field identifier
L:11 M:283 W: Missing Blank Line separator, <220> field identifier
L:15 M:283 W: Missing Blank Line separator, <400> field identifier
L:17 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:1
L:17 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:1
L:18 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:1
M:340 Repeated in SeqNo=1
L:19 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:1
L:25 M:283 W: Missing Blank Line separator, <220> field identifier
L:27 M:283 W: Missing Blank Line separator, <400> field identifier
L:37 M:283 W: Missing Blank Line separator, <220> field identifier
L:39 M:283 W: Missing Blank Line separator, <400> field identifier
L:48 M:283 W: Missing Blank Line separator, <220> field identifier
L:50 M:283 W: Missing Blank Line separator, <400> field identifier
L:59 M:283 W: Missing Blank Line separator, <220> field identifier
L:61 M:283 W: Missing Blank Line separator, <400> field identifier
L:73 M:283 W: Missing Blank Line separator, <220> field identifier
L:76 M:283 W: Missing Blank Line separator, <400> field identifier
L:78 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:6
L:78 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:6
L:88 M:283 W: Missing Blank Line separator, <220> field identifier
L:90 M:283 W: Missing Blank Line separator, <400> field identifier
L:101 M:283 W: Missing Blank Line separator, <220> field identifier
L:103 M:283 W: Missing Blank Line separator, <400> field identifier
L:114 M:283 W: Missing Blank Line separator, <220> field identifier
L:116 M:283 W: Missing Blank Line separator, <400> field identifier
L:126 M:283 W: Missing Blank Line separator, <220> field identifier
L:128 M:283 W: Missing Blank Line separator, <400> field identifier
L:140 M:283 W: Missing Blank Line separator, <220> field identifier
L:142 M:283 W: Missing Blank Line separator, <400> field identifier
L:154 M:283 W: Missing Blank Line separator, <220> field identifier
L:157 M:283 W: Missing Blank Line separator, <400> field identifier
L:161 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:12
L:161 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:12
L:169 M:283 W: Missing Blank Line separator, <220> field identifier
L:171 M:283 W: Missing Blank Line separator, <400> field identifier
L:183 M:283 W: Missing Blank Line separator, <220> field identifier
L:185 M:283 W: Missing Blank Line separator, <400> field identifier
L:197 M:283 W: Missing Blank Line separator, <220> field identifier
L:199 M:283 W: Missing Blank Line separator, <400> field identifier
L:211 M:283 W: Missing Blank Line separator, <220> field identifier
L:213 M:283 W: Missing Blank Line separator, <400> field identifier
L:222 M:283 W: Missing Blank Line separator, <220> field identifier

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Input Set : A:\PTO.txt
Output Set: N:\CRF3\12072000\I721414.raw

L:224 M:283 W: Missing Blank Line separator, <400> field identifier
L:235 M:283 W: Missing Blank Line separator, <220> field identifier
L:237 M:283 W: Missing Blank Line separator, <400> field identifier
L:249 M:283 W: Missing Blank Line separator, <220> field identifier
L:251 M:283 W: Missing Blank Line separator, <400> field identifier
L:259 M:283 W: Missing Blank Line separator, <220> field identifier
L:261 M:283 W: Missing Blank Line separator, <400> field identifier
L:270 M:283 W: Missing Blank Line separator, <220> field identifier
L:272 M:283 W: Missing Blank Line separator, <400> field identifier
L:282 M:283 W: Missing Blank Line separator, <220> field identifier
L:284 M:283 W: Missing Blank Line separator, <400> field identifier